

# BLM-COLORADO DIGITAL DATA SPECIFICATIONS GUIDE

**Last Revised 9/2015**

*Supplement to*

Handbook of Guidelines and Procedures for Inventory, Evaluation, and  
Mitigation of Cultural Resources

Bureau of Land Management

Colorado State Office

**New Information Highlighted**

## GIS and GPS Data

Because of its emphasis on data security, the Colorado OAHP serves as BLM's primary repository for geospatial inventory and site location data. Consequently, BLM and the OAHP operate under the same set of geospatial parameters. Some field offices have additional requirements. Details about these requirements, as well as other information, links and downloads may be found at:

[http://www.blm.gov/co/st/en/BLM\\_Programs/cultural\\_resources/cultural\\_resource.html](http://www.blm.gov/co/st/en/BLM_Programs/cultural_resources/cultural_resource.html)

### ***GPS Data Collection***

**Data collected by GPS must meet a  $\pm 5$  m. accuracy standard.** You should also independently confirm that the GPS equipment that you are using in the field is correctly recording their locations. Therefore, it is essential that USGS topographic maps, aerial photos, printouts of digital ortho-photo quads, or other hard-copy maps are still brought to the field. If the GPS equipment is proving to be inaccurate, or if satellite coverage is not available, you must record sites and isolated finds using hard-copy methods, and create shapefiles in GIS upon returning from the field. Differential correction is strongly encouraged, but *raw .ssf files will not be accepted by the BLM.* ***BLM will not accept geospatial data in any format except shapefiles.***

If you are using a GPS unit that does not run ArcPad, you must find a source for converting your field data into shapefiles. Note that BLM will not provide tech support for this process; please contact the manufacturer of the software or application that you are using.

Reminder: physical datums may no longer be placed in the field. Only electronic datums are acceptable.

### ***Shapefiles***

BLM and SHPO are aware that ESRI is phasing out shapefiles in favor of feature classes, however, at present neither entity is prepared to receive feature class data. If you regularly use feature classes, you must convert them to shapefiles before sending them to BLM.

*Projected coordinate systems:*

**NAD\_1983\_UTM\_Zone\_13N**

**or**

**NAD\_1983\_UTM\_Zone\_12N**

Offices may choose to send everything in Zone 13, but must indicate on the site form that " Zone 12 being projected into Zone 13".

*Geographic coordinate system:*   **GCS\_North\_American\_1983**

*Geometry type:*                   **Polygons *only***

[sites must have accurate boundaries, isolated finds buffered 4 meters, and lines buffered to the size of the inventoried area or linear feature (e.g., a 100'-wide inventory corridor should be buffered 15.7 meters)].

*Metadata:*                       **Attribute table metadata is sufficient.**

*Attribute tables:*               **Attribute tables** must conform to those linked to the GIS Templates section of the GIS Information page of the History Colorado website:

<http://www.historycolorado.org/oahp/gis-information>

***Sites and surveys must not be provided in a single shapefile.*** The shapefiles may contain multiple features, but site shapefiles that contain multiple sites must be accompanied by the SHPO attribute tables that clearly differentiate sites by Smithsonian Number.

***Site boundaries may not be identified by a generic graphic shape (circle, oval, rectangle, etc.).*** All ***sites*** must be recorded with multiple vertices that precisely form the site boundary. ***Isolated finds*** may be created from a datum point, but must be buffered and submitted to the BLM as polygons (the standard buffer is 4.3 meters).

***Please use the "Check Geometry" tool before sending shapefiles to BLM*** (in ArcGIS 10.1 and 10.2, it can be found in ArcToolbox under Data Management Tools > Features). If you find errors, it is advisable to correct them before submission.

***Shapefiles must be provided to BLM (not directly to the SHPO). Important requirements:***

- Shapefiles must have *short, uncomplicated names*, that follow basic best practices (for example, use an underscore rather than a "dot", as a "dot" tells the computer that an extension is about to follow).
- Please place shapefiles in a compressed file before emailing or uploading.
- **Do not nest compressed files in other compressed files.**
- Transmission options:
  - Email
  - Uploading to a secure company website
  - Uploading to SHPO FTP site (details to follow)
- BLM and SHPO *discourage* submission of data on CDs, as they are both environmentally unfriendly and their use is being phased out by computer

manufacturers. *However, CDs will be accepted if no other option is feasible.*

- SHPO does not incorporate submitted GIS files into their database until verified by paper forms, so changes are possible if shapefiles are submitted before paperwork is complete.

## SITE FORM AND REPORT DOCUMENTATION

### ***ELECTRONIC REQUIREMENTS<sup>1</sup>***

***All documentation must be submitted to BLM (not directly to the SHPO).***

Draft site forms and reports must be submitted to BLM electronically before ***preferably unbound<sup>2</sup>*** hard copy finals are mailed, and final PDF versions, updated with SHPO and BLM numbers must also be provided to BLM at the end of the project. Most BLM archaeologists prefer to receive *drafts* in Word (.doc or .docx) format in order to use the reviewing tool. PDF format is less desirable for *review*, but is the only format in which *final* reports and site forms will be accepted.

- Draft documents must not be “locked” or “secured”, as this prohibits electronic review.
- Site forms must be submitted in files that contain MDFs, component forms, maps, photographs and other documentation in a single file, by Smithsonian number. IFs must include the IF form and map, along with any other relevant documentation, in a single file, by Smithsonian number.
- **Site and IF forms** must follow the naming conventions:

**5\*\*\_\*\*-d\_site\_form (non-linear)**

**5\*\*\_\*\*\*\*\_\*-d\_site\_form (linear)**

**5\*\*\_\*\*-d\_IF\_form**

where 5\*\*\_ is the county abbreviation (e.g., 5PA\_), \*\*-d\_ is the site number (and point number, if appropriate) followed by a hyphen and the letter d (e.g. 1300-d\_), and the words “site form” or “IF form”, separated by an underscore, as shown.

- **Please ask BLM to obtain document numbers (vs. asking the SHPO yourself)**, as BLM also needs this information and will need to supply you with its number as well.

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<sup>1</sup> See the main BLM Handbook and 2014 BLM protocol for other reporting requirements.

<sup>2</sup> SHPO also prefers unbound reports. Check with your local BLM field office.

- **Reports** must follow the following naming conventions, based on the SHPO document number:

**\*\*\_LM\_R\*\*\*\***      or      **\*\*\_LM\_NR\*\*\*\***

where the first \*\* are the two-letter county code (e.g. FN), "R" for results (likely, if you are submitting a site form) and "NR" for no results or no new information about a site, with the last series of \*\*\*\* as a SHPO-assigned consecutive number (e.g. FN\_LM\_NR1 or FN\_LM\_R236)

- **Photographs** should follow the SHPO and SHF standards found at: [http://www.historycolorado.org/sites/default/files/files/OAHP/crforms\\_edumat/pdfs/1527photo.pdf](http://www.historycolorado.org/sites/default/files/files/OAHP/crforms_edumat/pdfs/1527photo.pdf)

- **Electronic report and site form submission options:**

- **Email.** *Only if* the documents small enough and contain no sensitive information (e.g., a limited results form). Email is not considered to be secure, and BLM's firewalls sometimes reject emails with attachments.
- **Secure company FTP site.** Many of the larger contractors have their own FTP sites, and can provide BLM access. As long as the site is secure, this is a desirable option.
- **SHPO FTP site.** This site is for data sharing between the BLM and SHPO only. Security concerns have caused the entities to alter the original policy of allowing contractors access to the site. Please find another option for sharing large files.
- **DO NOT USE GENERIC FILE-SHARING SITES** such as DropBox, Google Drive, etc. Because of the well-known security issues with these sites, BLM is discouraged or prevented from accessing them on government computers.
- **BLM discourages submission of shapefiles, reports and forms by CD.** If it is infeasible to provide the electronic data using online file-sharing, BLM will still accept CDs, but will phase out this policy in the future.